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# How People infer object ownership: Multiple Cues?

Greta Defeyter

Funded by British Academy

# How we use objects

Doesn't just depend on the design or  
conventional function.....

But who owns the object (at least in North  
America and Europe)

# Ownership

- Artifacts
  - Land (Gaza Strip)
  - Bodies
  - Actions
  - Ideas
- 
- Physical objects ...infer who owns what
  - Ownership is an important part of everyday life in all cultures (Brown, 1991)
  - Governs actions (Elkind & Debek, 1977: Hook, 1993)

# Ownership

- Private ownership
- Public ownership
- Shared ownership
- Legal ownership
- Psychological ownership
- Cultural ownership (museums, Harvard University)

# Ownership is a matter of social convention (Snare, 1972) Historical and Cultural Differences



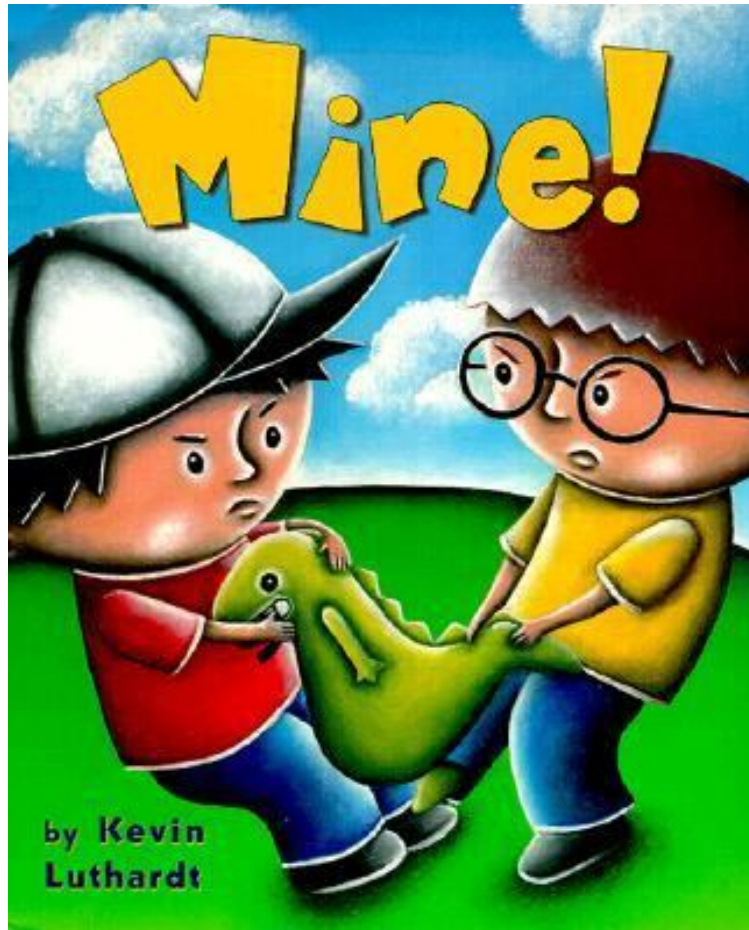
Many of our images of human slavery, like the one above, date from the American Civil War. However, there are an estimated 200 million people in bondage today.



Sudanese slaves await redemption in Madhol, Sudan, in December 1997. An Arab trader sold 132 former slaves, women and children, for \$13,200 (in Sudanese money) to a member of Christian Solidarity International.

Test Question: Can you own people? Adults (N= 289, 92% said 'No')

Social: If  $X$  is mine,  $X$  is not yours. Also individual not apply to a class.



However, need for caution.  
It's mine...I am playing with it  
right now vs. It really belongs  
to me

# Intentional acts

- “Giving someone an object to hold, to borrow, or “for keeps”, may involve the same physical motions. It is the intention of the parties involved that determine whether ownership has been transferred.” (Kalish, in press)
- Similarly...loss (unintentional)
- Abandonment (intentional; Defeyter et al., under review)



- Determining ownership by age two (Fasig, 2000)
- Many disputes over ownership of objects suggests that children may not always respect the rights of the first possessor (Hay & Ross, 1992)
- Permission (Kalish, in press)
- Property Transfers:(Blake & Harris, 2009; Noles, Keil & Bloom, 2009)

# Transfer of ownership

- A mature appreciation of ownership requires recognition that permanent transfers of property are possible.
- Can children disregard 1<sup>st</sup> possessor heuristic?

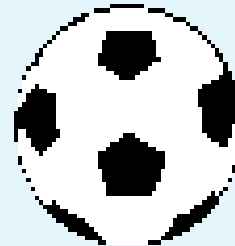
**Yes, in some situations**

However see Peter Blake & Paul Harris (2009)

Two- and Three-year-olds judge the 1<sup>st</sup> possessor as the owner.

# Property Transfers (Noles, Keil & Bloom, 2009)

## Experiment 1: Observer



*Tim gave the ball to Kevin. Who owns the ball?*

65% second graders, 5% fourth graders, & 5% adults

# Inferring Ownership

- Friedman & Neary (2008)...first possessor heuristic
- Children were told simple stories in which one character plays with a ball and then another character plays with it.
- Children were simply asked “Whose (ball) is it?”
- 3-4 year olds inferred that the ball was owned by the character who first possessed it.

# Current research studies

- Recent research has shown that first person to physically possess an object is its owner.
- However, there may be situations in which other competing principles for inferring ownership may be used.
- Little is known about what these other principles might be, under what conditions they are employed, or whether young children use them to infer object ownership

# Location

- People might consider an object's location when inferring ownership.
- E.g. If Peter discovers gold in Sue's garden then people might determine that the gold belongs to Sue, even though Peter possessed it first.

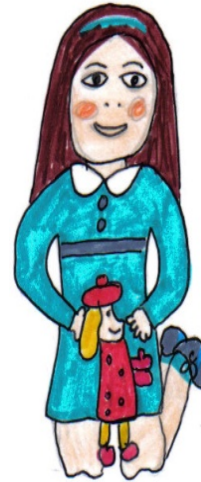
# Study 1

- Aim : To assess the development of abstract reasoning about ownership in terms of the contribution of the first possessor principle and the location in which the object is placed.
- Participants presented with vignettes in which objects were placed in locations associated with first possessor, second possessor or neutral locations
- Tested 3-4 year olds and adults (N = 240)

## Malcolm & Defeyter (submitted)



Sarah is playing with a doll.  
She likes playing with the doll.



Jane then plays with the doll.  
She likes playing with the doll too.  
Sarah and Jane both like the doll.

## Neutral condition

**Test question: “Whose doll is it?”**

**Note: No right or wrong answer**



# Location associated with second possessor (Conflict)



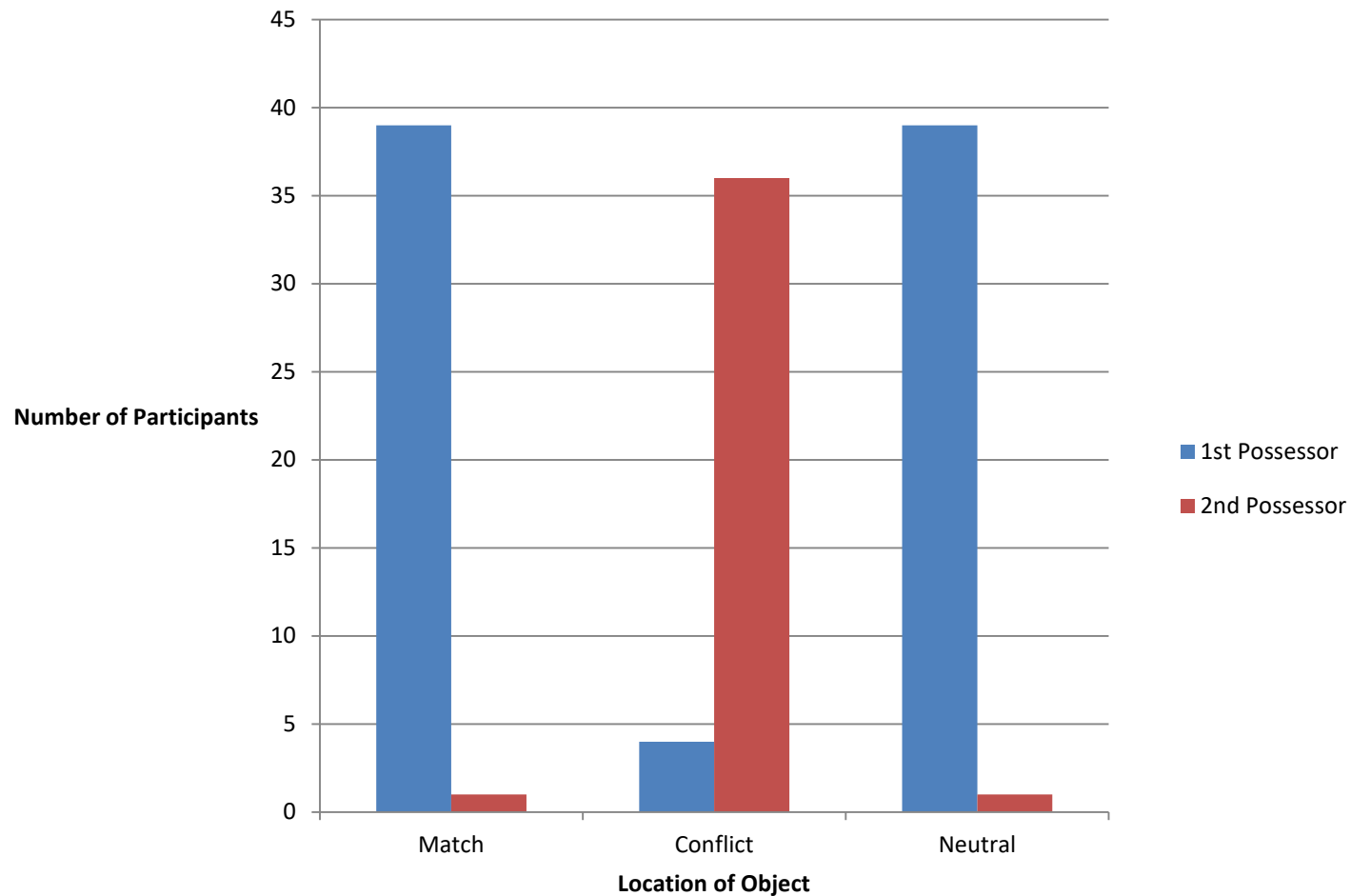


Fig 1: Number of 3-4 year olds selecting 1<sup>st</sup> possessor and 2<sup>nd</sup> possessor as a function of condition

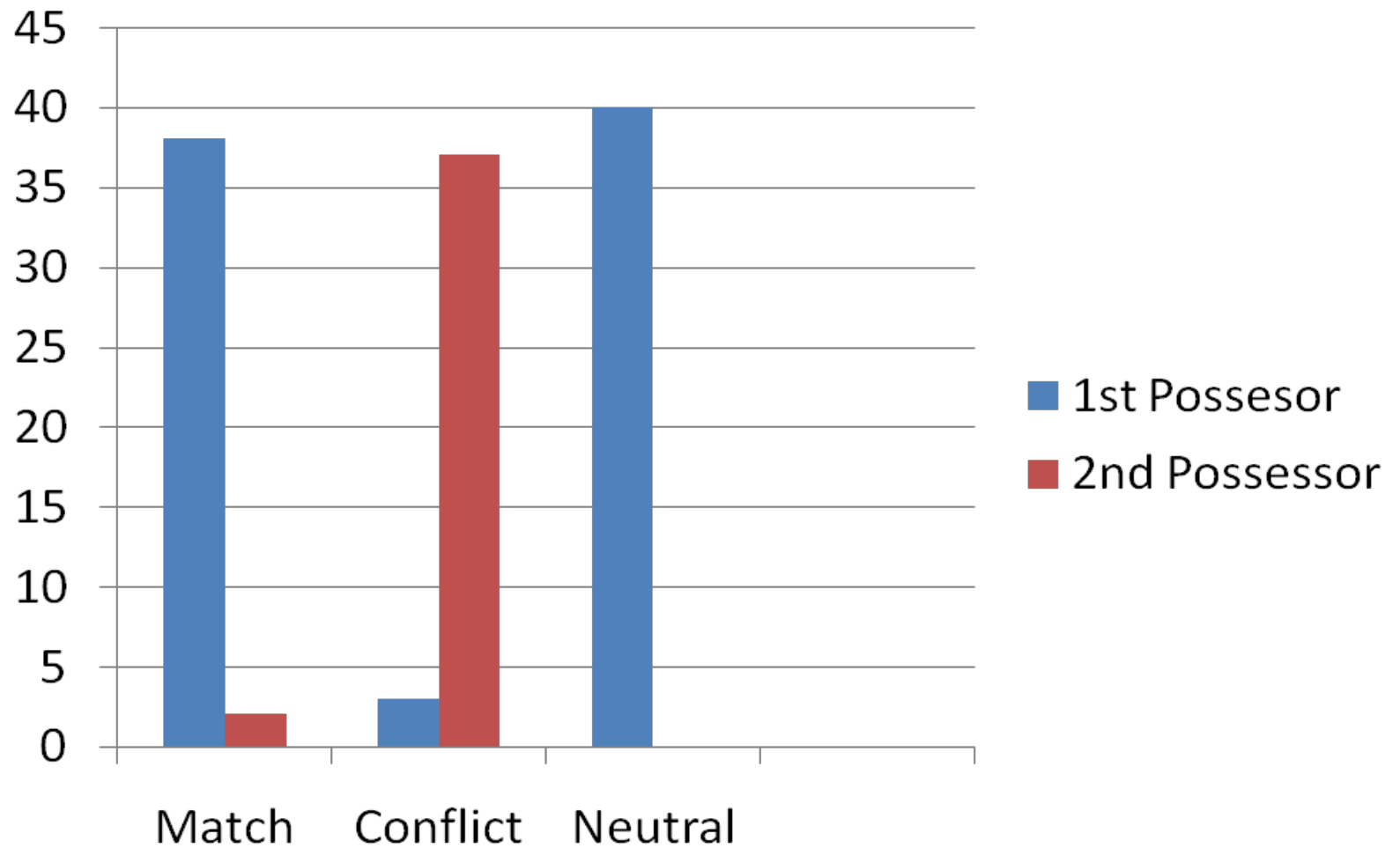


Figure 2: Number of adult's selecting 1<sup>st</sup> possessor as a function of condition

## Study 2

- Perhaps simply a brute association
- Everything in someone's bedroom belongs to them (Note Blake & Harris, 2009)
- What about another location?



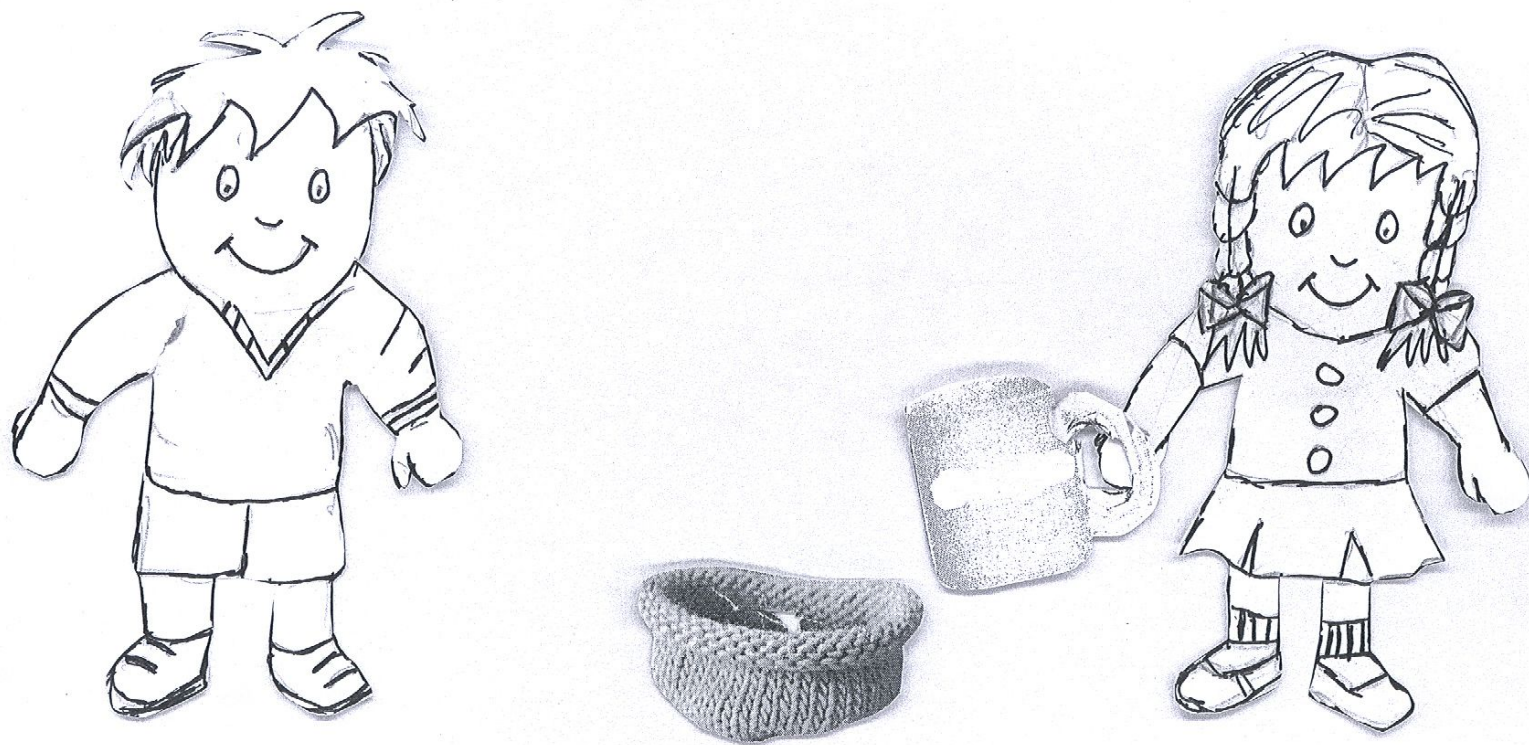
**This is Charlie**



**This is Emily**

**This is a mug in Charlie's hat**

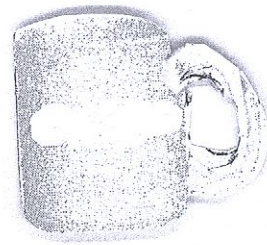
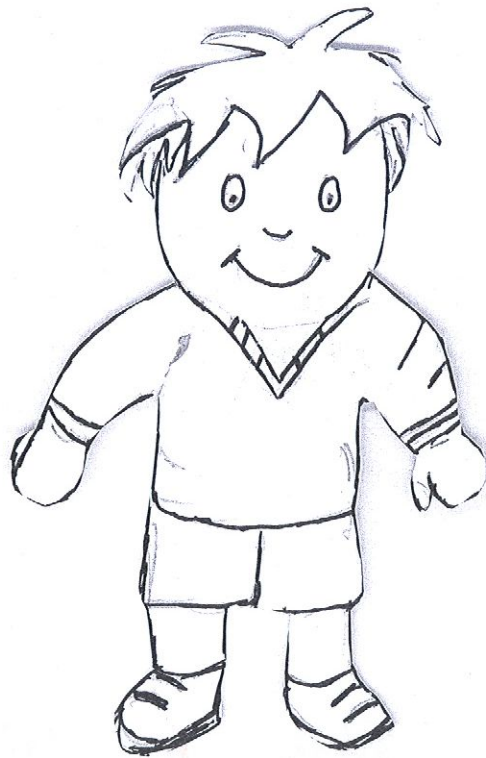




**Emily takes the mug out of Charlie's hat and plays  
with it**



**Charlie also plays with  
the mug**



Test Question: "Whose mug is it?"



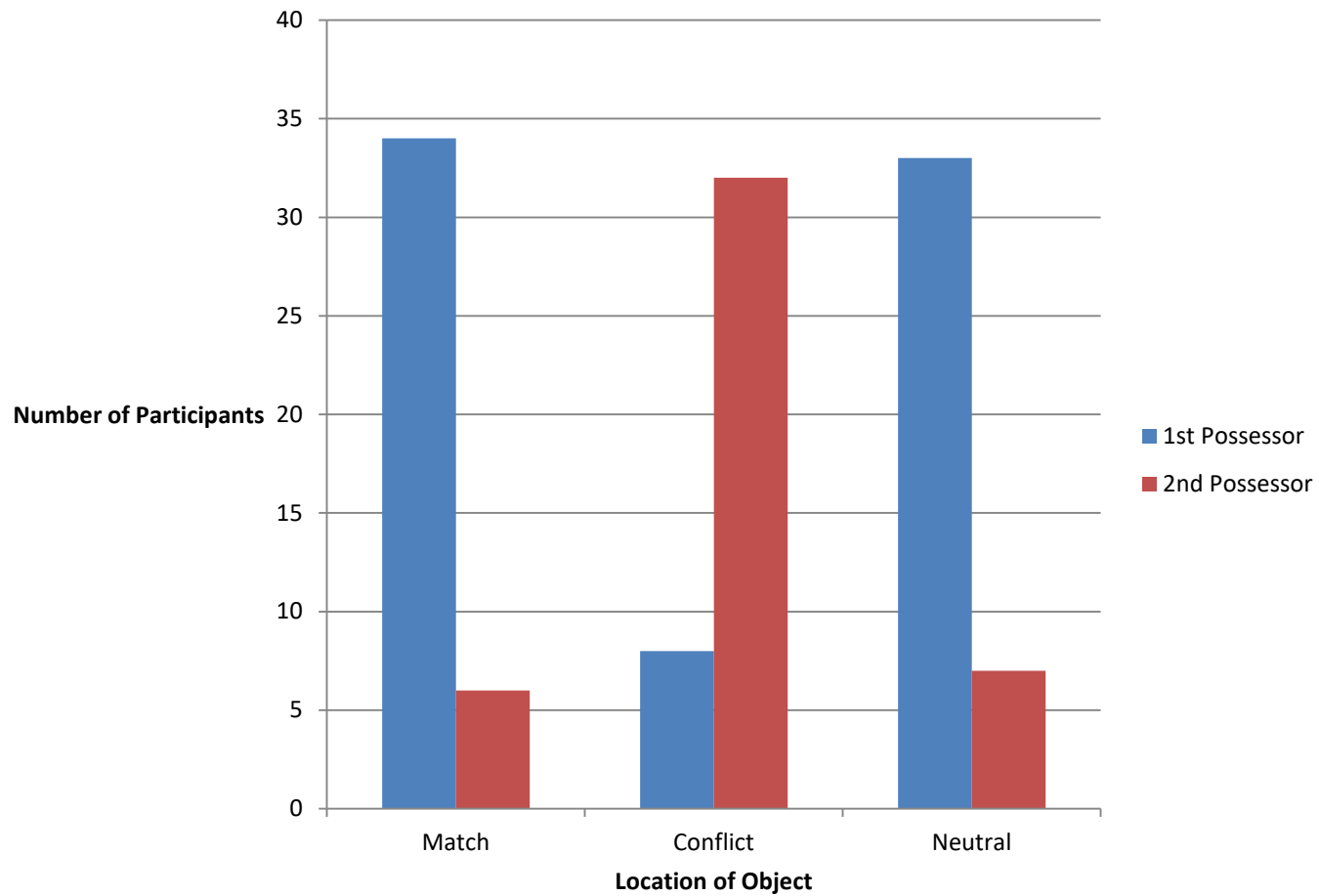
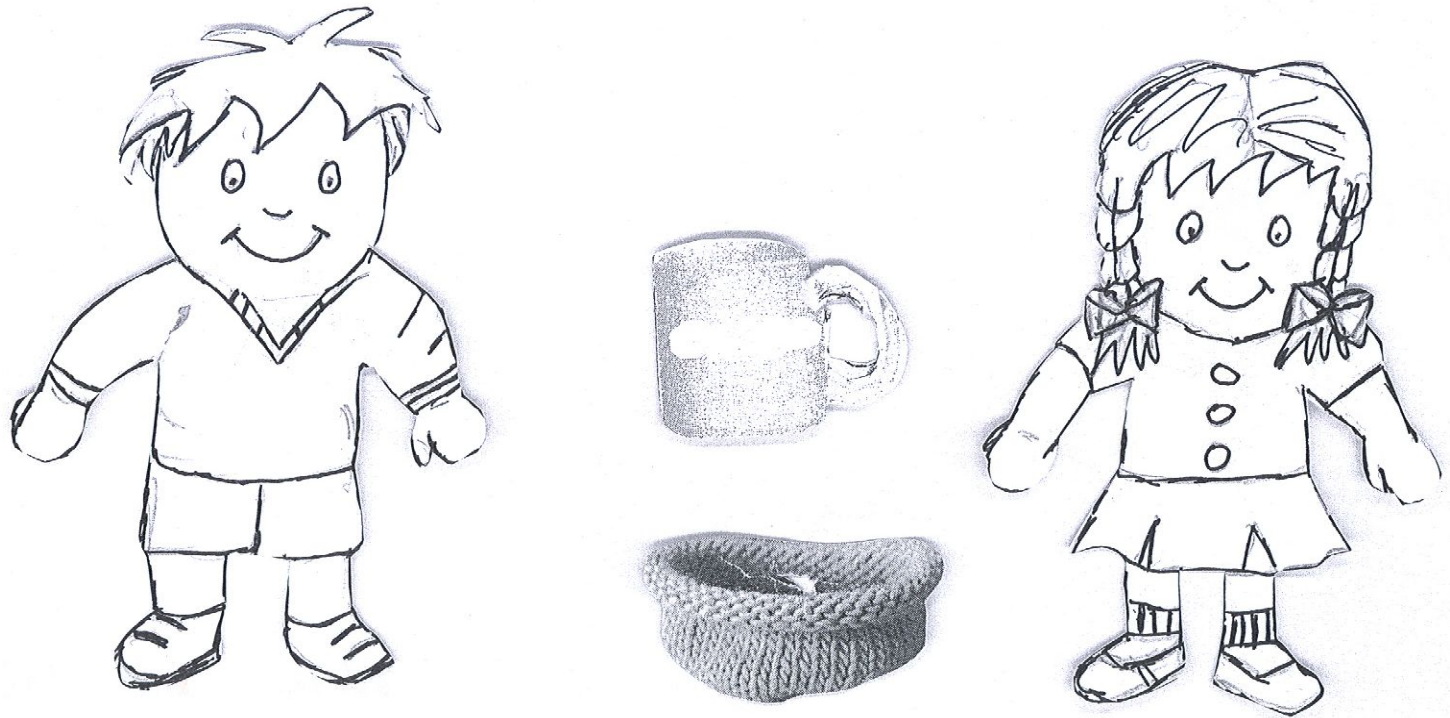


Figure 3: Number of 3-4 year olds selecting 1<sup>st</sup> possessor as a function of condition.

# Study 3: Cues from the artifact itself (no demonstration of possession) Malcolm & Defeyter (ongoing)



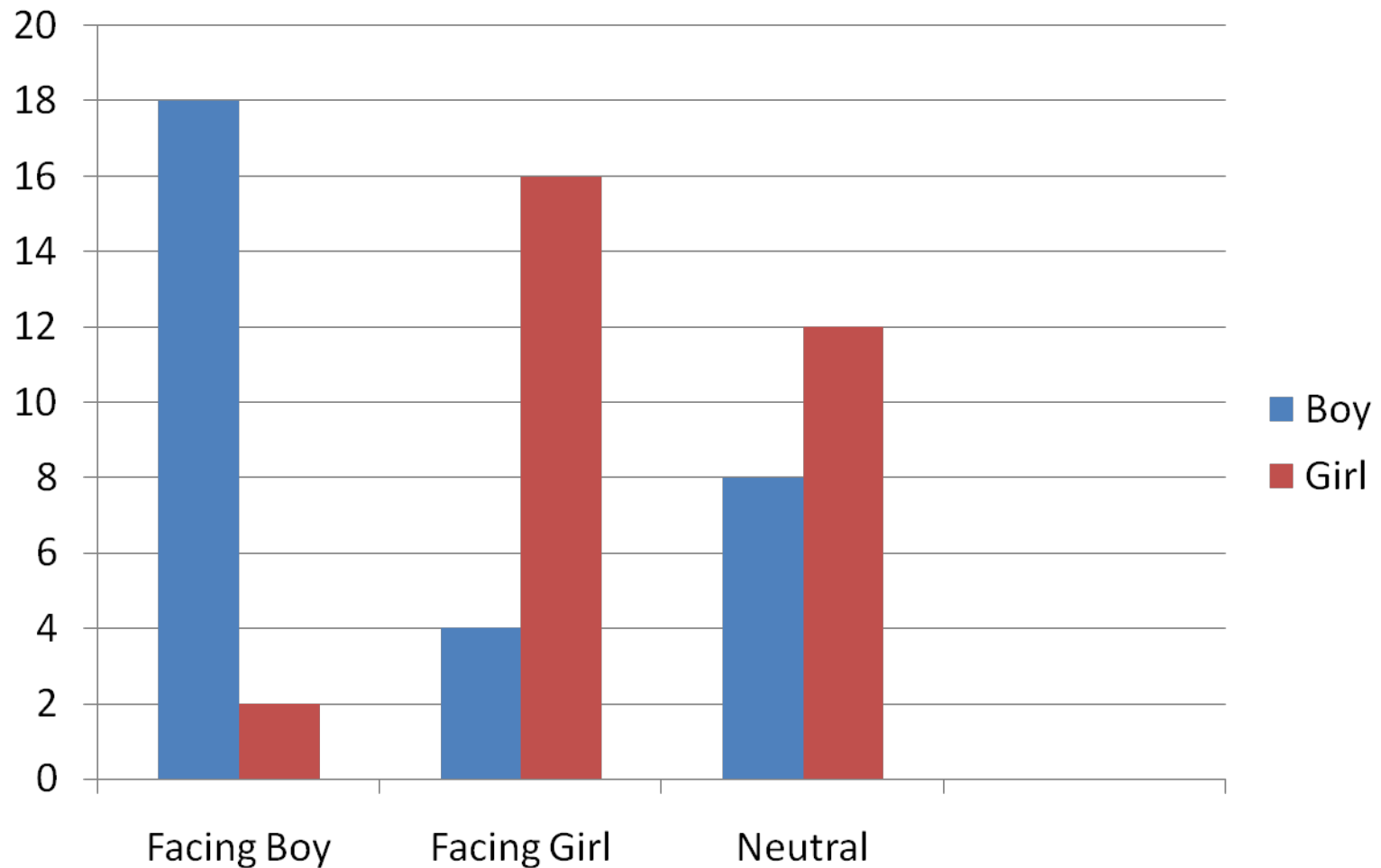


Figure 4: Number of judgements for each character as a function of condition (Adults, N = 60)

# Gender Stereotypical Objects

- Friedman found no evidence that gender stereotypical objects overrode 1<sup>st</sup> possessor.
- Study by Campernini (1999)

# Study 4: Gender stereotypical objects (Malcolm, Defeyter, & Friedman, in prep)



Charlie is playing with the jewellery box  
Charlie likes playir



Emily is playing with the jewellery box  
the jewellery box



Conflict Condition

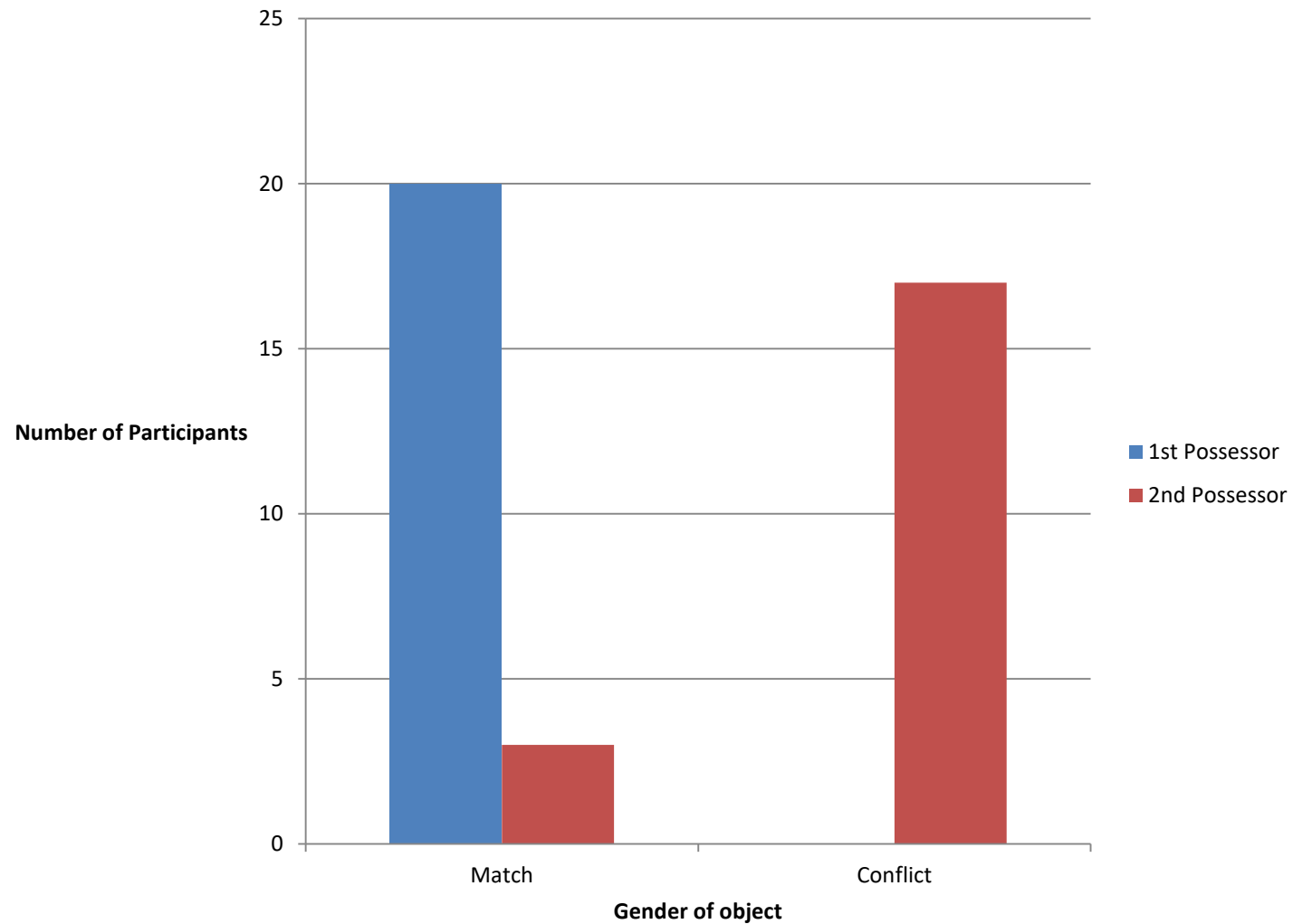


Figure 5: Number of 1<sup>st</sup> versus 2<sup>nd</sup> possessor judgements as a function of condition ( 4 Year olds)

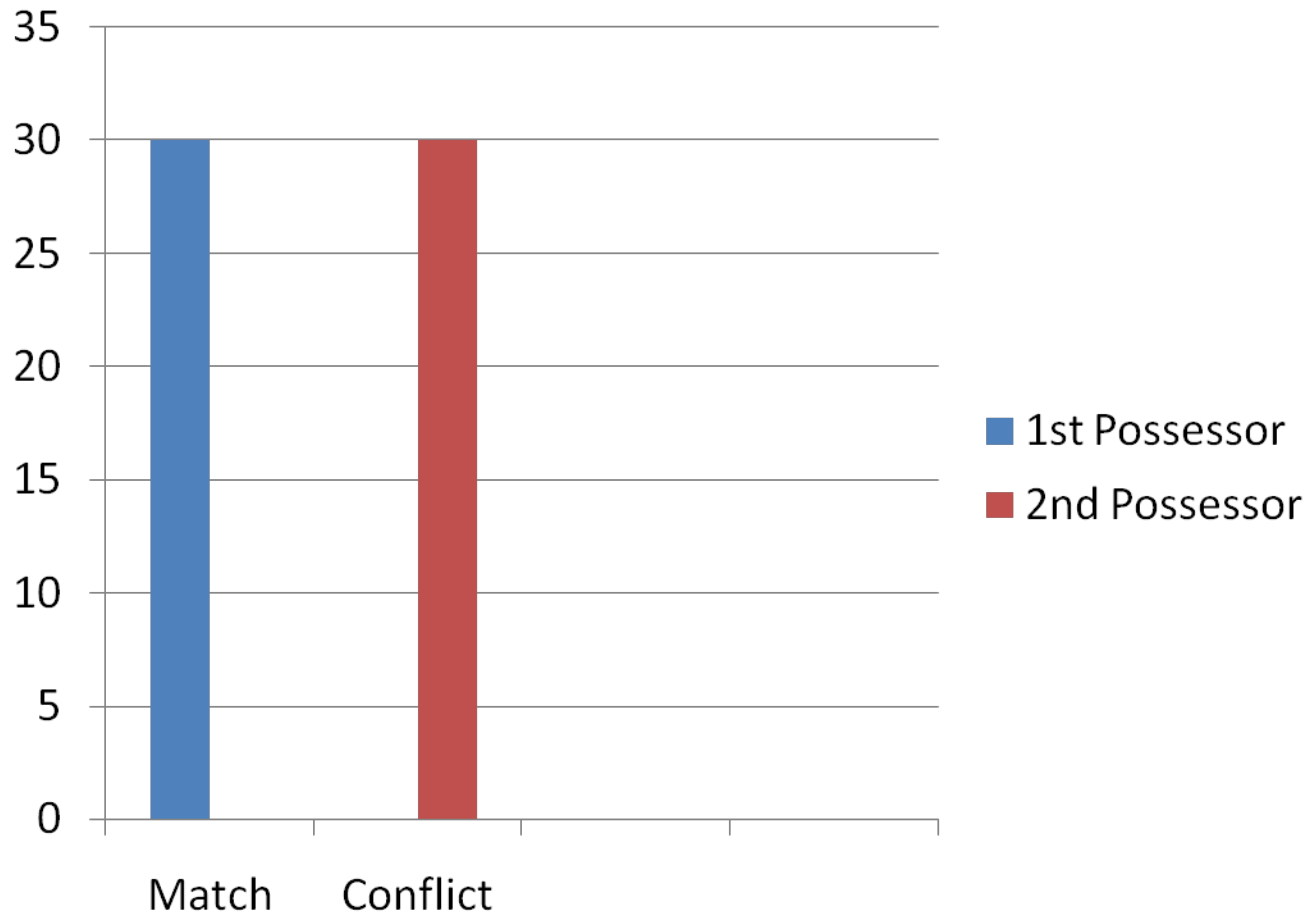


Figure 6: Number of 1<sup>st</sup> versus 2<sup>nd</sup> Possessor ownership judgements as a function of condition (Adults)

# A summary

- When inferring ownership we use many cues.
- First possessor (perhaps a first possessor heuristic, Friedman, 2008)
- Recent findings suggest that location and gender stereotypical objects override 1<sup>st</sup> possessor
- The relationship between the object in terms of the age of the agent (Malcolm & Defeyter, sub)



# Questions

- What is the cognitive architecture underpinning ownership?
- Is it the same mechanism for artifacts, ideas etc?
- Cross-cultural differences in terms of ownership
- Cross-cultural differences in terms of inferring ownership?
- Cross-cultural differences in terms of permission?

- Thank my collaborator Ori Friedman
- Sarah Malcolm (PhD student)
- Kat Telfer (Grad student)
- All the participating schools and nurseries

